

## SUMMARY

This Draft Environmental Impact Statement/ Draft Environmental Impact Report (DEIS/DEIR) has been prepared to inform the public and decision-makers about the potential environmental effects of the proposed project, and present reasonable alternatives which would avoid or minimize adverse impacts and enhance the quality of the human environment. This DEIS/DEIR is based on the completed technical studies. Preparation of this document is in conformance with the National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA). While CEQA requires that a determination of significant impacts be stated in the EIS/EIR, NEPA does not. [Chapter 5](#) provides a discussion of significance of impacts according to CEQA for the Route 905 project. This document provides dimensions of features in metric, followed by English units. Figures are placed at the end of each Chapter for the reader's convenience.

The project purpose is to provide for effective transportation of people, goods, and services between Interstate 805 (I-805) and the Otay Mesa Port-of-Entry (POE). Project objectives include alleviating existing traffic congestion, improving safety on Otay Mesa Road, providing adequate transportation facilities for the associated growth from planned and approved developments, and completing a major transportation corridor between Interstate 5 (I-5) and the POE.

The proposed action would consist of six mixed-flow travel lanes with a standard median from I-805 to Airway Road. A 21.0-meter (69-foot) median (See [Figure 2-4](#)) would allow for the potential addition of two lanes, which is not anticipated during the 20-year design period of the project. Implementation of the additional lanes would be subject to separate environmental review. The original project limits extended from I-805 to the POE, a distance of approximately 10-kilometers (6.2 miles). All of the technical studies prepared for this proposed project were based upon those original limits. However, the project limits from Airway Road to the POE encompass the Siempra Viva Road interchange project, which was approved for construction under a separate environmental review. The Siempra Viva Road interchange project was identified as a stand-alone project with independent utility and logical termini. The volume of existing and projected international traffic warranted this interchange improvement independent of the Route 905 project. This interchange improvement would have been necessary even if Route 905 is never constructed.

The proposed project represents an important link in the inter-regional and international transportation system included in the adopted San Diego Association of Governments (SANDAG) Regional Transportation Plan. [Figure 1-1](#) at the end of Chapter 1 identifies the project location. The proposed design (Freeway and Tollway) alignment (North, Central, South) alternatives combine to form the six possible build alternatives presented and discussed in this DEIS/DEIR.

An interim construction staging option, the Expressway Staging Option, is also under consideration. This option was originally studied as a full build alternative in the environmental studies. However, the transportation technical report and traffic forecasts have shown that this staging option would only serve as an interim improvement – an initial phase of the ultimate facility. Since this option would not meet project Purpose and Need for the year 2020 it was removed as a build alternative. The Expressway is now considered only as a stage of the Freeway Alignment Alternatives. This option would provide Caltrans with the ability to begin

construction on schedule and enable (the motoring public) traffic to utilize each associated construction phase as they are completed. The mapping and impact discussions provided through-out this document for the Expressway Staging Option are for informational purposes only and are not presented for impact comparison.

[Figure S-1](#) at the end of this Summary shows an aerial photo of the area with the project Alignment Alternatives indicated. The alternatives no longer under consideration would be unable to meet the project objectives and/or would have had greater environmental impacts. The six build alternatives are:

1. Freeway – North Alignment Alternative\*
2. Freeway – Central Alignment Alternative\*
3. Freeway – South Alignment Alternative\*
4. Tollway – North Alignment Alternative\*
5. Tollway – Central Alignment Alternative\*
6. Tollway – South Alignment Alternative\*

\*Freeway and Tollway Alignment Alternatives include either a full or partial (half diamond) interchange at La Media Road.

To facilitate studies, the proposed project was divided into three segments, west, middle and east; the North, Central and South Alignment Alternatives only diverge within the middle segment. There are no differences for the three Alignment Alternatives in the west and east segments. The North, Central and South Alignment Alternatives within the middle segment present different project footprints, and impacts. Each of the Alignment Alternatives are designed to minimize different resource impacts, as described in Chapter 2, [Section 2.1](#). The right-of-way acquisition requirements are similar for each of the Alignment Alternatives. Right-of-Way for the Tollway would be similar to that of the Freeway except that it would have, in select areas, a slightly greater footprint due to requirements for the addition of toll facilities, a parking lot and utility structure, and a toll administration building. The figures, at the end of Chapter 2 and the detailed Project Features maps in Appendix I, show the right-of-way and features for all six build alignment alternatives.

Construction of Route 905 would include a six-lane controlled access highway, and would include five local interchanges. The five interchanges would include locations at Caliente Boulevard, Heritage Road, Britannia Boulevard, La Media Road, and Siempre Viva Road. The Siempre Viva Road interchange as discussed above was approved for construction under a separate environmental review. In addition, a freeway-to-freeway interchange would be provided at Route 125.

[Table S-1](#) at the end of this summary, identifies project impacts for all six build alignment alternatives. [Figure S-1](#) provides of an overview of the entire proposed project. Unless otherwise indicated, all alignment alternatives have the same impacts. At the end of the summary is a discussion of the alignment alternatives within the middle segment. The discussion focuses on specific project-related impacts within this segment. This segment, depending on the selected alignment alternative, is where the majority of the project-related environmental impacts would occur. Differences in impacts for the two designs (Freeway and Tollway) are not as pronounced and selection of the design may be largely governed by financing realities. The text of the DEIS/DEIR examines and analyzes impacts by segment for each alignment alternative. For more detailed information regarding the impacts of the project, please see Chapter Four of the DEIS/DEIR and the technical study reports.

## **GEOLOGIC HAZARDS**

The most notable geotechnical hazards which have the potential for affecting any of the alignment alternatives include surface rupture at potentially active fault crossings, strong ground motion generated from onsite and nearby active and potentially active faults, and slope instabilities. Somewhat less important conditions, which the project would address during design, include expansive soils, corrosive soils, erosion, and soil settlement. Geotechnical hazards are nearly identical for all alignment alternatives. However, potential surface rupture from movement along splays of the La Nacion fault is a higher concern for the South Alignment Alternative, since two fault splays have been mapped adjacent to, and crossing this alignment alternative's corridor. Potentially compressible soil, in areas where there are documented and undocumented fills, is a consideration for all alignment alternatives, as well as at the "Tripp Landfill" immediately west of Cactus Road.

Standard design measures (e.g. the use of Caltrans Standard Specifications), and the use of other relevant construction practices and codes, would eliminate or minimize the effects of these potential hazards.

## **PALEONTOLOGICAL RESOURCES**

Portions of the project area are underlain by geologic deposits, which contain high-sensitivity paleontological resources. The alignment alternatives would all have similar impacts to these resources. Impacts would be minimized through a comprehensive program of construction monitoring, fossil salvage, fossil preparation and curation, fossil storage and report preparation.

If buried resources are unearthed during construction, work must be halted in the vicinity of the find until a qualified paleontologist can assess and recover them. None of the alignment alternatives would have a substantial impact to sensitive paleontological resources.

## **HYDROLOGY / DRAINAGE IMPACTS**

The alignment alternatives would all have similar impacts upon hydrology and drainage. There would be no modifications of water bodies, relocations of streams, or effects on stream uses. There would be minor impacts to the drainages in Spring Canyon. Standard drainage design would maintain normal flow in these drainages and ensure there is no increase in erosion impacts. Numerous pipes and culverts would be required to convey storm waters through the project corridor. Detention basins would be needed and would all be located within the proposed project footprint or disturbance limits.

The project would cause increased runoff as the impervious area of the road replaces the natural surface. Analysis shows that with standard drainage design and construction of detention basins, the increase in runoff would be minimized for all alignment alternatives resulting in no more runoff coming from the area than exists today. The proposed detention basins will be soft-bottom, and will require periodic maintenance. Any incidental vegetation, which establishes as a result of the soft bottom basins is not intended as mitigation for other project impacts.

## **WATER QUALITY IMPACTS**

Potential water quality impacts would be both short-term (construction) and long-term (operational) effects such as erosion/sedimentation, disposal of groundwater, generation of contaminants and roadway maintenance. The alignment alternatives present negligible differences in level of impacts.

The proposed project could impact a number of identified hazardous materials sites with materials such as gasoline, diesel, and oil. Any, unlikely release of hazardous materials could impact beneficial uses of downstream waters and groundwater.

### **Mitigation Measures**

Caltrans has recently been issued a National Pollution Discharge Elimination System (NPDES) Storm Water Permit by the Department of Water Quality (NPDES ORDER 99-06 CAS 000003). The proposed project will comply with International Boundary Water Commission (IBWC) guidelines, which recommends that new developments do not result in cross-border storm runoff volumes that exceed pre-development levels. All identified impacts from construction-related erosion and sedimentation as well as facility operation will be minimized by using standard requirements related to water quality for roadway development projects:

- Implement Caltrans' documents such as: Storm Water Management Plan, Storm Water Quality Handbooks, Contractors Guide and Specifications, and the use of applicable Best Management Practices.
- Use soft bottom, vegetation lined drainages and detention basins wherever possible.
- Maximize erosion control during construction and for the ultimate project condition and operation.
- Vegetate new slopes with native plants, where appropriate.

## **SOCIAL IMPACTS**

The social impacts to the Otay Mesa area would be minimized given the proposed measures presented below. A small number of existing residences and businesses would be affected. Differences in impacts for the alignment alternatives are negligible.

### **Residential Relocations**

The surrounding area within the project corridor is sparsely developed, and all of the alignment alternatives would impact residential properties. Each of the impacted residential properties is located along Cactus Road. One residential property includes an associated business (chickens/egg sales), and another residential property includes a non-profit use (Chapel of Good News). There are also planned residential developments, which could be impacted by the project. The total number of residential relocations is small (two for the Freeway Alignment Alternatives and four for the Tollway Alignment Alternatives). The impact would be minor, and market availability of replacement resources is expected through the time of displacement for all alignment alternatives. Standard measures to minimize impacts upon displacees would be used, under the Caltrans Relocation Assistance Program. The program would provide relocation assistance to all property owners, and pay fair market value for all land and improvements in

accordance with the Federal Uniform Relocation and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act). Chapter Four provides a discussion on the specifics of this program. Caltrans would attempt to relocate (Tollway Alignment Alternative only) the “Chapel of Good News” (a church which operates from one of the homes) in an area suitable to the operator and membership. The Tollway Alignment Alternative would represent a full-take acquisition for the church/ home.

### **Business Relocations**

Two businesses would be subject to full-take acquisitions by all alignment alternatives, Cactus Recycling and a chicken/ egg sales business. Within the First Draft Relocation Impact Study Addendum the Martin Furniture factory on St Andrews Avenue had been identified as a full-take acquisition. This relocation would have represented an expensive and time-consuming effort. The relocation of the Martin Furniture factory has since been avoided via a minor alignment variation. The alignment variation, adjacent to the Martin Furniture factory, involves an eight-meter (24 feet) shift to the south. This alignment shift to the south also avoids partial impacts to businesses immediately west and east of Martin Furniture. A new man-made drainage ditch impact would be presented by this southerly alignment shift. This new impact is discussed within the biological resources section of this document. This minor design change is also included in the appropriate updated graphics.

Each business displaced by the project would be relocated under the Caltrans Relocation Assistance Program and the Federal Uniform Act. Each qualified business would receive fair market value for their property and compensation for the cost of moving and relocating their operations. Additional measures include:

- Early buyout and leaseback program for business if time permits (see Chapter Four for specifics)
- Businesses may be eligible for \$20,000 “in lieu” payment.
- Businesses would be assisted in relocating in Otay Mesa or nearby if they so desire.

With the implementation of these measures, impacts would be minimized.

### **Local and Regional Accessibility**

Currently accessibility within Otay Mesa is constrained and congested. Otay Mesa Road (recently widened to six lanes) will temporarily assist with congestion, but will not adequately provide for long-term accessibility and congestion relief. Residents and businesses would benefit from the construction of Route 905, due to safer and more convenient vehicle travel. Temporary vehicular access and circulation impacts would occur during construction. Clearly identifiable vehicular access would be maintained during construction, including emergency vehicle access. Access would ultimately be enhanced by all alignment alternatives.

### **Proximity Effects**

There are only a small number of existing homes where proximity effects (such as, noise, air, visual, and traffic) would occur adjacent to the highway corridor during construction and operation. Visual impacts vary depending on the alignment alternative and are discussed in the Visual section of the summary. Noise impacts are discussed in the Noise section below; few

receptors/ homes are impacted. Traffic and access impacts would be minimized during construction due to the use of detours and a traffic management plan (described in Chapter Two).

Regional access would be improved with the alignment alternatives since travel times would be reduced. Local access is also expected to improve since the local streets would experience less congestion. With the No Project Alternative, impacts from future traffic increases and congestion would occur on local streets along the corridor.

### **Community Character and Cohesion**

Residences on the mesa are currently dispersed, spread throughout the mesa, and there is no identified neighborhood or community. Therefore, a new highway would have minimal effect on community character and cohesion. It would not separate residents from public services and facilities, since most of these facilities are located out of the area. The proposed project would provide easier direct access to the metropolitan areas of San Diego. This easier direct access would increase the growth potential for this area, which could ultimately effect the community character. This project is an integral part of the ongoing development and future urban conversion of the entire Otay Mesa area, as discussed in the Growth section, which is governed by the Otay Mesa Community Plan and East Otay Mesa Specific Plan. The rural or semi-rural character of the area is undergoing rapid change.

### **Public Safety and Health**

Response times for emergency services would be enhanced by the proposed project. The response times would not be adversely affected during construction as no existing or future cross streets would be closed. On-site detours would not require the re-routing of traffic. Route 905 would contribute to the improvement of the health, safety and welfare of the area's residents by reducing the potential for accidents and traffic-related fatalities on Otay Mesa Road.

### **Environmental Justice**

In accordance with Title VI of the Civil Rights Act of 1964 and Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President Clinton on February 11, 1994, directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Although minority or low-income individuals (US Health and Human Services defines low income as an annual income of \$17,050.00 for a family of four) are likely to be affected by the Route 905 project, these individuals are dispersed, and there does not appear to be an established community within the project corridor. Construction of the project would occur in an area with a higher proportion of minority and low-income residents when compared to regional demographics; however, only a small number of households would be impacted by the project. The potential adverse effects on low-income or minority individuals would not be disproportionately high. See Chapter 4, [Section 4.5.5](#) for details. Local residents have been given opportunities during the environmental process for Route 905 to participate in meetings and hearings. They will continue to have such opportunities.

## LAND USE

The proposed project would minimize impacts to land uses, since the alignment alternatives are consistent with local land use plans and decisions. This consistency includes the preservation of a vacant highway corridor by the City of San Diego through developments (existing and planned) on Otay Mesa. The potential for impacts to planned residential developments exists only if they are built prior to Route 905 project construction.

### **Plan Consistency**

The SANDAG Regional Transportation Plan (2020 RTP) is the comprehensive transportation plan for the San Diego region. The proposed project is consistent with the Highway Element of this plan. Details are provided in [Section 4.6.1](#).

The proposed project is consistent with the City of San Diego Otay Mesa Community Plan. This plan identifies a six-lane freeway in the same location as the proposed project. Therefore the alignment alternatives are consistent with this plan. The County of San Diego's East Otay Mesa Plan includes the area east of Route 905. The proposed local access road to Enrico Fermi Drive is within the corridor, which the County has reserved for future Route 11.

The Multiple Species Conservation Program (MSCP) identifies the Multi-Habitat Planning Area (MHPA) within the Study Corridor and refers to the proposed project as an acceptable use within the MHPA. The MHPA in this area is associated with Spring Canyon, its tributaries and surrounding mesa top areas. The MHPA also forms a wildlife corridor connecting Spring Canyon with Dennerly Canyon to the north of Otay Mesa Road. The proposed project would impact these MHPA areas and the wildlife corridor; however, with the implementation of the biological mitigation program, the project would conform with the MSCP Subarea Plan. The South Alignment Alternatives would include a bridge over the wildlife corridor. The North and Central Alignment Alternatives would not meet the plan's culvert wildlife undercrossing design dimensions for large mammals, because the proposed culvert's length to width ratio exceeds the Subarea's plan maximum 2:1 ratio. However, this proposed culvert size is considered effective considering the corridor's constraints from border fencing to the south and a 1.8 meter (6-foot) culvert under Otay Mesa Road to the north. In addition to the requirements imposed by the MSCP, the guidelines presented for the MHPA would be adhered to.

### **Park and Recreational Resources**

There are no direct impacts to or constructive use of publicly owned parks or other recreational resources, and there are no other resources subject to 4(f) in the project area. The purpose of 4(f) is to preserve publicly owned parkland, recreation areas, refuges, and historic sites by limiting the circumstances under which such land can be used for transportation programs or projects. Constructive use occurs when, due to proximity of the proposed project, activities, features, or attributes of the Section 4(f) resource is substantially impaired. A detailed definition of Section 4(f), constructive use and their applicability is provided in Chapter 4, [Section 4.6.2](#). The MSCP includes Route 905, and the MSCP lands impacted by the proposed project are privately owned, including an impacted parcel owned by Pardee, the Otay Corporate Center South (OCCS), which is being developed into a biological resource preserve. Therefore, no affected resources are subject to Section 4(f) of the United States Department of Transportation Act (49 USC §303), and Section 4(f) does not apply.

## **Open Space**

A substantial amount of undeveloped land (mostly farmland) exists within areas covered by both the Otay Mesa Community Plan and East Otay Mesa Specific Plan. The proposed Route 905 alignment alternatives, however, do not encroach into or impact any officially designated open space.

## **Farmland**

According to guidelines and evaluation results from the Farmland Protection Policy Act (FPPA), project impacts to farmland are considered minor. According to the FPPA evaluation results, the farmland on Otay Mesa should be given a minimal level of consideration for protection. Additionally, the FPPA definition of farmland does not include land already committed to urban development, and since the entire mesa is planned for future urban use, farmlands are considered an interim use.

## **ECONOMICS**

### **Effects on Business**

The economic effects to businesses from right of way acquisition and displacement include the costs of moving, replacing buildings, and the effect of relocation on revenues and projects. The same two businesses would be displaced by all of the alignment alternatives. Impacts to industrial and commercial land uses in the area are not expected to be substantial. Each business displaced would be relocated under the Caltrans Relocation Assistance Program and the Federal Uniform Relocation Act.

Project construction would have beneficial impacts on business and industrial growth in the area as a whole. However, during construction and operation, some businesses near the project may experience a loss of patronage. Construction wages would have a beneficial economic impact in the area.

## **GROWTH**

Development in Otay Mesa has been constrained because of the traffic congestion associated with the existing conditions on Otay Mesa Road. Otay Mesa Road was recently widened to six lanes, and will temporarily relieve some of the congestion problems. However, this improvement to Otay Mesa Road will not adequately provide for long-term congestion relief. Route 905 together with other infrastructure would have a major influence on future planned growth patterns. Secondary impacts to cultural and natural resources, air quality, noise levels, public services, open space, and infrastructure are likely. To the extent the proposed project would assist in accommodating the additional traffic demands resulting from planned growth in the area, the cumulative growth impact is considered substantial with all alignment alternatives.

The Study Corridor is slated for large-scale industrial and commercial development, and there are 29 private development plans and proposals located within the corridor each having tentative or final map approval. There are also 15 public development projects proposed within the Study Corridor. Appendix C provides a breakdown of each of the private and public development

plans, including commercial, industrial, and residential uses. Route 905 would remove an obstacle to this planned growth, representing an indirect growth-inducing impact. Population forecasts assume the construction of Route 905, therefore the resulting growth is not expected beyond what is anticipated by regional forecast. Planned development would occur until full build-out in accordance with the plans and policies of local governing agencies.

It is anticipated that, considering planned development and expansion on Otay Mesa, cumulative impacts to resources would occur. Developments and their mitigation measures are governed by local land use plans. The extent, timing, and nature of future growth is governed by development firms and the local planning agencies charged with overseeing development plans.

## VISUAL

The proposed project presents potential visual impacts, which vary from “low” to “moderately high” depending on the alignment alternative. The grading of large cut and fill slopes and interchange structures present the most prominent new visual elements to the area. A portion of the potential fill slope within the Spring Canyon area (approximately 400 meters [1312 feet] long) would be supported by an earth retaining system and would have a slope ratio of 1:1. The introduction of lighting along the highway would also change the current setting. Extensive mitigation measures are proposed and presented in Chapter 4, [Section 4.9.3](#).

## BIOLOGICAL RESOURCES

Direct impacts to sensitive biological resources are shown in [Table S-1](#). All the alignment alternatives impact wetlands, vernal pools, coastal sage scrub, and riparian scrub. In addition, all alignment alternatives impact the California gnatcatcher, listed by the Federal government as threatened. Conservation programs and preserves within the Study Corridor include the MSCP, Multi-Habitat Planning Area (MHPA), and the Otay Corporate Center South Preserve (OCCS). The MSCP is a comprehensive habitat conservation-planning program that addresses multiple species habitat needs and the preservation of native vegetation communities. The MHPA is a preserve system within the MSCP that includes a network of large habitat blocks with interconnecting linkages. The OCCS is a preserve system that was created as part of the Otay Corporate Center development.

The United States Fish & Wildlife Service (USFWS) has determined that surveys conducted for the Quino checkerspot butterfly in 1997, 1998, and 1999 flight seasons are acceptable (meeting on February 3, 1999 – Sherry Barrett, USFWS). Although the results of these surveys were negative (no butterflies were found), however a Quino checkerspot butterfly was observed in March 2001 within an area crossed by both the North and Central Alignment Alternatives. Further protocol surveys will be done in Spring 2002. If an Alignment Alternative is selected which impacts the Quino, impacts to the species will be mitigated in accordance with the Section 7 consultation with the Fish and Wildlife Service, and in coordination with the Federal Highway Administration. Mitigation may include land acquisition and/or selected restoration activities.

The potential for impacts to key resources within the Study Corridor are specific to four regional issues: vernal pools and their associated species, the MHPA, coastal sage scrub and the gnatcatcher, and wetlands. The middle segment encompasses the majority of impact to native

habitats within the study corridor. Impact acreages are generally correlated with the amount of right-of-way required. The Tollway would have the largest right-of-way requirements.

The alignment alternatives present different degrees of impacts to biological resources as shown in [Table S-1](#). The Biological Resources Technical Report attempts to weigh the various impacts to determine which alignment alternative is the least biologically damaging. The North Alignment Alternative is the least desirable from an overall biological standpoint, based on the higher impact to vernal pools and associated sensitive species, impacts to wetlands and riparian habitats, and impacts to the OCCS Preserve, although it would be the best alignment alternative for the MHPA. The preferred choice, according to the technical report, between the South and Central Alignment Alternatives is less clear because of the different ways they each impact resources. The Central Alignment Alternative has the least impact on vernal pools, and only one of the pools impacted (#54) supports sensitive species (San Diego fairy shrimp). The South Alignment Alternative has the greatest impact to coastal sage scrub and associated species, and passes through the middle of Spring Canyon (MHPA land). Impacts to the MHPA are greatest for the South Alignment Alternative and least for the North Alignment Alternative, with the Central Alignment Alternative falling intermediately between the other two. Impacts identified for all alignment alternatives, except for vernal pools, would be mitigated and all alignment alternatives would meet the objectives of the City's MSCP Subarea Plan.

The two most important resources within the Study Corridor are considered to be vernal pool habitat and the MHPA. The Biological Resources Technical Report concludes that the Central Alignment Alternative is preferred overall from a biological perspective, because it would have the least impacts to vernal pool resources, and less impact than the South Alignment Alternative on the MHPA.

## Mitigation Measures

Acquisition of land supporting vernal pools and/or habitat creation will be required by regulatory agencies. Specific vernal pool mitigations will be determined as part of the Section 404 and Section 7 permit requirements. The Central Alignment Alternative is an impact minimization alternative that was developed in response to agency comments. This alignment alternative would minimize vernal pool impacts.

- All proposed mitigation would occur within the boundaries of the MHPA.
- Potential mitigation sites for all impacts to biological resources will be identified in consultation with the USFWS, the California Department of Fish and Game (DFG), and the United States Army Corps of Engineers (ACOE).
- A bridge (South Alignment Alternatives) or culvert (North and Central Alignment Alternatives) is planned for Spring Canyon, to preserve the MHPA wildlife corridor and reduce fragmentation.
- Maximize use of native Diegan coastal sage scrub in the right of way through hydroseeding and landscaping. Salvage topsoil and duff to apply to graded slopes.
- California adolphia, coast barrel cactus, snake cholla, Palmer's grapplehook, San Diego marsh elder, Munz's sage, and variegated dudleya: for these plants which would be removed by the project, seeds and/or cuttings will be collected from the right of way prior to clearing and grubbing and used to revegetate where appropriate.
- Create vernal pools within the MHPA at a replacement ratio between 2:1 to 4:1 within the MHPA portion of the Study Corridor (depending on sensitive species present).

- Consider salvaging soil in vernal pools, in lieu of preservation of existing populations, where direct impacts would occur (and if sensitive species are known to occur), and place it within newly created pools.
- No exotic or invasive landscape species will be used adjacent to sensitive habitat.
- Designate Environmentally Sensitive Areas (ESAs) during construction where right of way is adjacent to sensitive habitats. No construction-related disturbance will be allowed in ESAs.
- Incorporate elements in the design of the Spring Canyon bridge or culvert to provide roosting areas for bat species (vertical crevices approximately 32-60 mm [1.25-2.25 inches] wide and 0.6-0.9 meter [2-3 feet] deep).
- Apply water quality best management practices to avoid sedimentation impacts to wetlands, other waters, and vernal pools.

### **Conclusion (CEQA)**

Direct impacts to vernal pools, within the proposed project area, cannot be completely mitigated despite the proposed efforts for on and off-site preservation/ restoration. All other impacts to biological resources will be mitigated.

### **CULTURAL RESOURCES**

Cultural resource studies were done to comply with Section 106 of the National Historic Preservation Act and with 36 CFR Part 800, as well as with CEQA. The Historic Properties Survey Report (HPSR) presents all the studies which inventory and evaluate the cultural resources located within the project's Area of Potential Effects (APE), and assesses project effects to the one eligible historic property.

Based on evaluations conducted on the above resources, only one prehistoric archaeological site, CA-SDI-11,424, has the qualities necessary for it to be considered eligible for listing on the National Register of Historic Places and for placement on the California Register of Historical Resources. Once field and laboratory studies confirmed the importance of this site, project plans were redesigned to avoid impacting any of the subsurface components of this resource, from which this site's significance is derived.

Otay Mesa also contains a large, diffuse surface scatter of cultural materials. A management plan for the mesa as a whole has been developed as part of the HPSR, to more effectively deal with this scatter.

The State Historic Preservation Officer (SHPO) has concurred on the adequacy of the studies involving the inventory of cultural resources located within the project's APE, and the evaluation of those resources. Section 106 compliance was obtained on January 11, 2000 (a copy of the SHPO letter appears in Appendix E). SHPO also concurred that the proposed construction of Route 905 will have "No Adverse Effect" on any historic properties listed on, or determined eligible for listing on, the National or California registers. This is because of project redesign to avoid impacting any of the qualities that make CA-SDI-11,424 eligible for inclusion in these registers.

## Mitigation/ Monitoring Measures

ESA's will be designated around the adjacent recorded sites, and declared off-limits to construction activities. These will be delineated on the project construction plans in order to avoid impacts to these resources.

Monitoring will be undertaken by a qualified archaeologist while construction takes place near archaeological site CA-SDI-11,424, to ensure that there is no impact to this site. If buried cultural materials are unearthed during construction, work will be halted in the vicinity of the find until a qualified archaeologist can assess its nature and significance.

## HAZARDOUS MATERIALS

An initial site assessment identified 57 sites ([Figure 4-33](#), [Figure 4-34](#), [Figure 4-35](#), and [Figure 4-36](#)) with the potential for hazardous material in the Study Corridor. Two of the 57 sites identified, would be impacted by all of the proposed alignment alternatives. The first site is an unpermitted hazardous waste landfill (Tripp Landfill), which occupies and fills the head of Spring Canyon adjacent to and west of Cactus Road. A County of San Diego remedial action workplan (RAW) has been developed for the properties encompassing the Tripp Landfill with rationale and methodologies to cap the site with asphalt. According to these recommendations and correspondence with the County the asphalt cap alternative would be the chosen remedial action. A final decision from the County regarding the RAW is pending public comment prior to CEQA certification. The Route 905, project design will require disturbance of the asphalt cap. The Tripp Landfill asphalt cap and the material underneath, subsequent to the District's geo-technical evaluation, will not support the load presented by the proposed project. These conditions would require either total removal of the Tripp Landfill waste, or treatment of the waste in-place by recompaction and placing a surcharge fill to accelerate consolidation settlement of the waste prior to building any structural section of the proposed project in this area. The removal of the waste and repairing the cap would cost approximately \$700,000. This action would be designed for compatibility with the design and construction of Route 905.

The second hazardous material site is Cactus Recycling. The soil conditions on this site include agricultural chemicals, metals, petroleum hydrocarbons, and other recycled materials. The site investigation performed determined that the soils would need to remain onsite to avoid potential hazardous materials impacts. A statistical analysis of soil contamination levels indicates that soil can remain on site if the proposed project does not disturb the soils. Work in this area will be on fill and the highway profile will also be raised in this area, therefore no disturbance is expected.

The Study Corridor also includes sites with small amounts of hazardous material/ waste and sites with undocumented refuse that was discharged into the canyons and mesa. These sites have been screened and found not to contain sumps, pits, or tanks that would be a source of soil or groundwater contamination.

Uncontrolled dumping has occurred in a number of areas within the Study Corridor. Refuse piles consist of vegetation, concrete, and household waste. This material is not hazardous, based on a visual inspection. The differences in the associated nature or level of potential hazardous materials impacts for the Tripp Landfill, Cactus Recycling, and the undocumented refuse sites are negligible.

## **Mitigation Measures**

Caltrans, during design and construction of the proposed project, will work closely with the County and government regulators having oversight on the Tripp Landfill. This will ensure that the proposed project is compatible with and corrects any disturbance to the selected remedial alternative for the Tripp Landfill. Any disturbance to the Tripp Landfill, in conjunction with the proposed project, will require development and implementation of a Site Health and Safety Plan (SHSP) and a Community Health and Safety Plan (CHSP), in accordance with the current DEH Site Assessment and Mitigation Manual. The SHSP would address the need for site workers to be informed and trained on hazardous waste operations and emergency response. The CHSP would address potential exposure to adjacent properties and the general public, and present measures to protect the public from exposure.

Design of the proposed project will allow all soils from Cactus Recycling to remain within the site limits. Soil will remain on site and raising the highway profile through project design in this area will ensure that no export of existing soils will be generated from this property. No impacts to the existing hazardous materials on this site are anticipated from the proposed project.

Caltrans standard specifications and requirements will be followed regarding hazardous materials. If unexpected hazardous materials are discovered during construction, the resident engineer will halt work in the area of concern, flag the area, and notify the Caltrans District Hazardous Waste Coordinator. A HAZMAT team in the region will arrange for waste sampling and identification, and follow established procedures for removal/ cleanup.

## **FLOODPLAIN ASSESSMENT**

There are no FEMA-mapped regulatory floodways or 100-year floodplains at any locations affected by any alignment alternatives for the proposed project. The 1989 National Flood Insurance Program (NFIP) maps identifies this area as an “Area of Minimal Flood Hazard”. However, a 100-year base floodplain was identified, as described in Chapter Four; the proposed project would result in a longitudinal encroachment on this floodplain east of La Media Road. Direct physical effects of the project on the floodplain would be limited to temporary construction impacts and effects from placement of the selected alignment alternative within the floodway. Encroachment impacts and risks for all alignment alternatives would be avoided through routine design measures. The project would not increase the risk of loss of life, nor would the highway operations be affected by flooding. For all of the alignment alternatives under consideration adequate drainage design measures would be installed, therefore avoiding an obstruction to flood flows. There are no sensitive biological resources in the floodplain area, and there would be minimal impact to natural and beneficial floodplain values. The project would not support incompatible floodplain development by providing no new access or direct access to the affected floodplain.

## **Measures to Minimize Impacts**

Installation of cross-culverts would allow for the continued natural flow of floodwaters and would minimize physical disturbance of the floodplain. The floodplain administrator agency for this area is the City of San Diego. The city’s progress towards finalizing the Otay Mesa Drainage Master Plan (OMDMP) is currently on hold pending the identification of additional funding. Caltrans is a cooperating partner and will participate in a fair share contribution to the

floodplain protection within this basin, provided the costs are less than or equal to the costs for the drainage facilities Caltrans would install if the master plan were not implemented. Caltrans participation as a cooperating partner would also be contingent upon the master plan being implemented prior to the construction of Route 905. Routine construction procedures required by Caltrans for all projects would minimize impacts during construction. No additional measures to minimize impacts are required.

## **ENERGY**

There would be no wasteful energy uses caused by any of the alignment alternatives. In the long term, reduced congestion would save energy.

## **NOISE**

### **Existing Sensitive Receptors**

Two existing sensitive receptor sites were identified according to the FHWA Noise Abatement Criteria Guidelines and the Caltrans Noise Protocol. Site 1 is a single-family dwelling located immediately south of Otay Mesa Road between Old Otay Mesa and Heritage Roads. Site 2 includes three single-family residential properties, all of which are located on Cactus Road. According to 23 CFR 772, FHWA noise analysis guidelines, noise abatement must be considered under two different scenarios. The first involves a substantial noise increase, which occurs when existing noise levels are increased by 12 decibels (dBA) or more. The second scenario is when the predicted noise level increase approaches or exceeds the Federal Noise Abatement Criteria (NAC) level of 67 dBA. Approaching the NAC means noise levels within one decibel or 66 dBA. The properties associated with Site 2 would experience either a substantial noise increase or noise levels that approach or exceed the NAC, depending on the alignment alternative. The property associated with Site 1 would only experience noise level increases with the No Project Alternative. The existing noise levels for the properties on Cactus Road provided in [Table S-1](#) (66dBA) are elevated due the frequent use by truck traffic. Presently, Cactus Road is a travel way, which provides an alternative route through the Otay Mesa area to and from the Otay Mesa Port of Entry. The proposed project would cul-de-sac Cactus Road, therefore eliminating the truck traffic. As a result existing noise levels as background noise would no longer be valid. Background noise levels were recently measured without truck traffic and the results were 55dBA (Leq). The difference between predicted with recommended barrier and background noise levels for properties on Cactus Road is more than 9dBA. Therefore, according to noise protocol supplement, the noise level with barrier will remain as analyzed and background noise levels will not be altered.

Noise abatement measures are being considered for the residences at Site 2, with the exception of one property located at 1708 Cactus Road. This property would represent a full take for the Tollway Alignment Alternative only. Chapter 4 ([Section 4.15](#)) provides a detailed discussion for all alignment alternatives on the type and level of impacts, as well as, the proposed noise abatement measures for each residential property. If pertinent parameters change substantially during the final project design, the preliminary noise abatement/ mitigation design may be changed or eliminated from the final project design. A final decision on the construction of the noise abatement/ mitigation will be made upon completion of the project design and public input.

### **Planned/Future Developments**

Development plans within the Study Corridor include 29 private and 15 public development projects listed in Appendix C. These related development projects call for residential, commercial, and industrial uses, as well as, schools, conceptual parks and other related uses. Four of the private development projects (California Terraces, Santee Investments/ Otay Mesa, Remington Hills, and Rivera Del Sol) identified in Appendix C and adjacent to the proposed project have completed the appropriate environmental clearances. The approval of these projects has been conditioned by the City of San Diego to provide adequate noise abatement measures in anticipation of Route 905. A Caltrans' noise specialist has conducted the appropriate analysis and determined that the proposed noise barriers for these developments will meet the Federal and State standards according to NEPA requirements. The City has the authority to require abatement to meet noise standards for these developments.

Caltrans has a responsibility to consider noise abatement measures, based upon the reasonable and feasible findings, for all potentially impacted areas that are planned and permitted prior to NEPA action on the Caltrans project. Given the conditioned approvals described above for the four named projects, noise abatement measures will not be considered as part of the Route 905 project. If additional planned developments, including but not limited to those described in Appendix C, receive the appropriate environmental clearance prior to the NEPA action on the Route 905 project, Caltrans will conduct the appropriate noise analysis to determine if noise abatement measures are necessary. At this stage of the proposed project there are no noise abatement measures planned for future developments, however, prior to final design an additional noise study will be conducted if deemed necessary.

### **Noise Abatement**

Noise abatement measures both within the highway right-of-way and on private property have been evaluated. Noise barriers within the highway right-of-way would be of excessive length and cost, and would not meet the reasonable criterion established (Traffic Noise Analysis and Protocol) in terms of an acceptable cost-benefit ratio. The reasonable criterion requires proposed noise abatement to meet the parameters of reasonable and feasible findings. Construction of half-box noise barriers on private property would meet these parameters and be effective in reducing noise levels. Noise barriers may be reasonable on private property only if a permanent easement is granted, and this will be determined once a preferred alignment alternative has been selected. These barriers are proposed for the properties mentioned above and will be examined further subsequent to consultation with the owners. The half-box barriers would involve a masonry block wall built on private property, which wraps around the potentially impacted residences, thus providing a noise shadow. The potential visual impact and mitigation measures, associated with the noise abatement measures, are discussed in Chapter 4, [Section 4.9.3](#).

### **AIR QUALITY**

The proposed project would not result in new exceedences of air quality standards. The level and nature of projected air quality effects are similar for all alignment alternatives. Microscale air pollution exposure at the selected receptor sites, as characterized by future carbon monoxide (CO) levels, range between approximately 7 and 13 ppm (parts per million) for 1-hour CO levels, and 4.1 to 7.6 ppm for 8-hour CO levels. These levels are well within the acceptable CO

concentrations for state, federal and Occupational Safety and Health Administration (OSHA) standards. The proposed project will not cause or contribute to any new localized PM-10 violations or increase the frequency or severity of any existing PM-10 violations. The proposed project is included in the San Diego Association of Governments (SANDAG) 2020 Regional Transportation Plan (RTP). A conformity finding on the 2020 RTP was issued by FHWA/ FTA and adopted on February 25, 2000. Additionally, the proposed project is included in the SANDAG 2000/2001 Federal Transportation Improvement Plan (FTIP), which is included in its entirety into the State Transportation Improvement Plan (STIP). The conformity determinations were made by SANDAG on February 25, 2000. FHWA and FTA issued a conformity finding on SANDAG's FY 2000/ 2001 FTIP on October 6, 2000. Additionally the proposed project is authorized for federal funding through the Federal Statewide Transportation Improvement Program (FSTIP). The proposed project meets all criteria for a finding of conformity with the State Implementation Plan (SIP).

## **CONSTRUCTION IMPACTS**

Construction activities cause temporary impacts with respect to air quality, noise levels, erosion, and access or traffic circulation. These impacts are not considered substantial. The proposed project would interfere with local traffic causing some delays and occasionally disrupting access. Otay Mesa Road would not be closed; detours would ensure traffic would continue to flow. Fire and safety service providers, and local businesses would therefore not experience substantial impacts.

## **Mitigation Measures**

### Air Quality

- Compliance with Caltrans' Standard Specifications Section 10 "Dust Control".
- Compliance with Caltrans' Standard Specifications regarding air pollution control.
- Apply water to site and equipment as frequently as necessary to control dust.
- Spread soil binders on site, unpaved roads, and parking areas.
- Wash off trucks / equipment before leaving the site, as necessary.
- Properly tune and maintain equipment.
- Use low-sulfur fuel for equipment.

### Noise

- No pile driving at night (7:00pm to 7:00am), on weekends, or on State and Federal holidays near identified sensitive receptors on Cactus and Heritage Roads, or near any which may be identified during on site monitoring.
- Proposed noise barriers will be constructed as a first order of work within the designated abatement areas, where feasible. If not feasible as first order of work, construct temporary barriers until such time that proposed barriers can be constructed.

### Water Quality

- Compliance with Caltrans' Standard Specifications, and NPDES permit.
- Use of Best Management Practices to minimize erosion and sedimentation.

### Traffic Circulation and Access

- Preparation of a traffic management plan, which ensures that clearly identifiable access to and from homes and businesses will be retained.
- Regional circulation will be maintained and local circulation will be accommodated via detours.
- A public awareness program will be developed to inform the public of the upcoming detours and construction schedule.
- Emergency providers (fire, police, and medical) will be informed of all detours. Pedestrian and bicycle access will be maintained.
- Construction signage, signalization, or flag-persons will be used during construction in areas with pedestrian access.

Despite the duration of the construction period, and noise impacts in certain areas, the overall impact would be minor, due to the small number of sensitive receptors near the construction zone.

## **CUMULATIVE IMPACTS**

Cumulative impacts to vernal pools are considered substantial when considered with other highway and development projects in southern San Diego County. Cumulative impacts for all other resources are not considered substantial. Planned development in the area would result in substantial cumulative impacts to resources on Otay Mesa. Developments and their mitigation measures are governed by each of three local land use plans which provide for the orderly, timely, and environmentally sensitive nature of land use development. Because the extent, timing, and nature of future growth is governed by development firms and the local planning bodies charged with overseeing development plans, Caltrans cannot assume responsibility for secondary environmental impacts and mitigation related to growth. Chapter 4, [Section 4.8](#) provides detailed discussion on growth impacts, and Chapter 4, [Section 4.22](#), provides a detailed discussion of the cumulative impacts related to Route 905 and the other related projects. Appendix C lists the known development projects in the Otay Mesa area and provides a detailed presentation of cumulative resource impacts from the associated development projects.

## **IMPACTS NOT SUBSTANTIAL (UNDER CEQA)**

The following would either have no impact, or have only a minor impact with no mitigation measures warranted: geologic hazards, air quality, energy and coastal zone. The project has no effect on the coastal zone, which is approximately 4.8 kilometers (3 miles) to the west.

## **IMPACTS NOT SUBSTANTIAL AFTER MITIGATION (UNDER CEQA)**

The following impacts would not be substantial after incorporation of the recommended mitigation measures: hydrology/ drainage, socioeconomic, visual, biological resources (except vernal pools), water quality, hazardous materials, floodplain, noise, paleontological resources, cultural resources and construction impacts.

## **IMPACTS REMAINING SUBSTANTIAL AFTER MITIGATION (UNDER CEQA)**

Impacts to vernal pools (direct and cumulative), and the secondary impacts of growth would be substantial, even after the implementation of mitigation measures.

## **NO PROJECT ALTERNATIVE**

With the No Project Alternative, there would be no impacts to resources, homes or businesses, nor would it cause secondary impacts due to growth. Substantial traffic increases would occur as well as congestion along Otay Mesa Road. Congestion would result in travel delays, lower accessibility, longer response times for emergency vehicles and less timely opportunity for growth/ development.

## **MAJOR ACTIONS PROPOSED BY OTHERS**

There are 29 private and 15 public development plans or proposals in either final or tentative map stages, which are located within the Route 905 Study Corridor. They consist of residential, commercial, airport, industrial, and other developments and are listed in Appendix C of this DEIS/DEIR, and are discussed in detail in Chapter 4 ([Section 4.6.1](#)).

## **AREAS OF CONTROVERSY**

No controversy or opposition to the proposed project has been recorded at public involvement meetings to date. The public appears to support the alignment alternatives by indicating they believe the project is justified. There is widespread support for the project from local citizens' groups and agencies.

## **ISSUES TO BE RESOLVED**

Relevant issues to be resolved before implementation of this project are listed below. Impact issues are fully discussed in Chapter Four.

- Selection of a preferred alignment alternative.
- Noise barriers located on private property subsequent to property owner consultation.
- Specifics regarding biological resources mitigation (pending consultation with resource agencies).
- Detailed drainage design and drainage features, including decisions on size and location of detention basins; consultation with City of San Diego/ IBWC.
- Permits and approvals must be obtained (see the next section).

## PERMITS AND APPROVALS

The following permits and/ or approvals would be required from the respective responsible agencies:

- Endangered Species Act - Section 7 consultation for threatened and endangered species (USFWS).
- A streambed alteration agreement (Section 1601) will be needed from the California Department of Fish and Game (DFG), prior to construction.
- Section 2080.1 certification for threatened and endangered species from DFG.
- U.S. Army Corps of Engineers Section 404 Permit (Nationwide/ Individual) will be needed prior to any construction activity.
- A Section 401 certification (or waiver thereof) will be required from the Regional Water Quality Control Board (RWQCB); water quality issues are addressed prior to issuance of the Section 404 Permit.
- To satisfy Section 402 of the Clean Water Act, a Notice of New Construction (Form) will be provided to the San Diego RWQCB prior to the beginning of actual construction, per the Waste Discharge Requirements and NPDES Permit No. CAS029998 for the California Department of Transportation permit requirements adopted on March 12, 1997.
- Consistency determination from USFWS and DFG regarding the MSCP.
- California Transportation Commission approval of the project, and Route Adoption.
- Freeway Agreements (City of San Diego, County of San Diego).

### Concurrence Process Update

In 1995, Caltrans began coordinating with the federal resource agencies, including the FWS, ACOE, EPA, and FHWA to implement the NEPA-404 Integration Process for the Route 905 project. The project's alternatives were developed during meetings with these resource agencies, along with the California Department of Fish and Game, in order to minimize biological resource impacts. Further minimization of impacts to natural resources during the preliminary design phase has occurred. The new revised interim thresholds for the NEPA-404 Integration Process issued by the United States Department of Transportation (October 30, 2000), prompted Caltrans to request the Route 905 Project's withdrawal from the NEPA-404 Integration Process. These interim thresholds stated that projects with impacts of two hectares (five acres) or less to special aquatic sites, or impacts of two hectares (five acres) or less to other waters of the U.S. are no longer required to follow the NEPA-404 Integration Process. The impacts to waters and wetlands for this project have been minimized substantially, through coordination with the resource agencies, and as a result of design modifications. The proposed project impacts are well below the new interim thresholds. Based on this coordination the FWS, EPA, ACOE, and FHWA have concurred with Caltrans' request to withdraw the Route 905 Project from the NEPA-404 Integration Process. Caltrans will continue to work closely with all of the resource agencies to maintain communication and coordination throughout the proposed project's development.

## DISCUSSION OF BUILD ALIGNMENT ALTERNATIVES

[Table S-1](#) provides a summary of impacts to facilitate comparison of all six build alignment alternatives. The main focus of the project alignment alternatives impact comparison is the

Middle Segment, where the North, Central, and South Alignment Alternatives diverge. The Middle Segment has critical biological concerns associated with it. Resource and regulatory agencies have documented their position that the highway should minimize impacts to biological resources. Alignment alternatives were designed with this in mind. The North Alignment Alternative would minimize impacts to sensitive Diegan coastal sage scrub habitat and MSCP lands. The Central Alignment Alternative would minimize impacts to vernal pools and their associated watersheds. The South Alignment Alternative would avoid the OCCS wildlife habitat preserve west of Heritage Road and correspond closely with the adopted route that has been identified for the Route 905 corridor.

The alignment alternatives remain consistent for each of the project designs (Freeway and Tollway); however, the designs vary with respect to project features and right-of-way requirements.

### **Route 905 EIS/ EIR – Document Review Locations**

The Draft EIS/ EIR for Route 905 can be reviewed at the following locations:

Caltrans District – 11  
2829 Juan Street  
San Diego, CA 92186

City of San Diego – Central Library  
820 E Street  
San Diego, CA 92101

Otay Mesa – San Diego Branch Library  
3003 Coronado Avenue  
San Diego, CA 92154

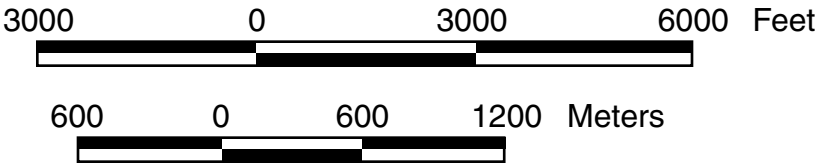
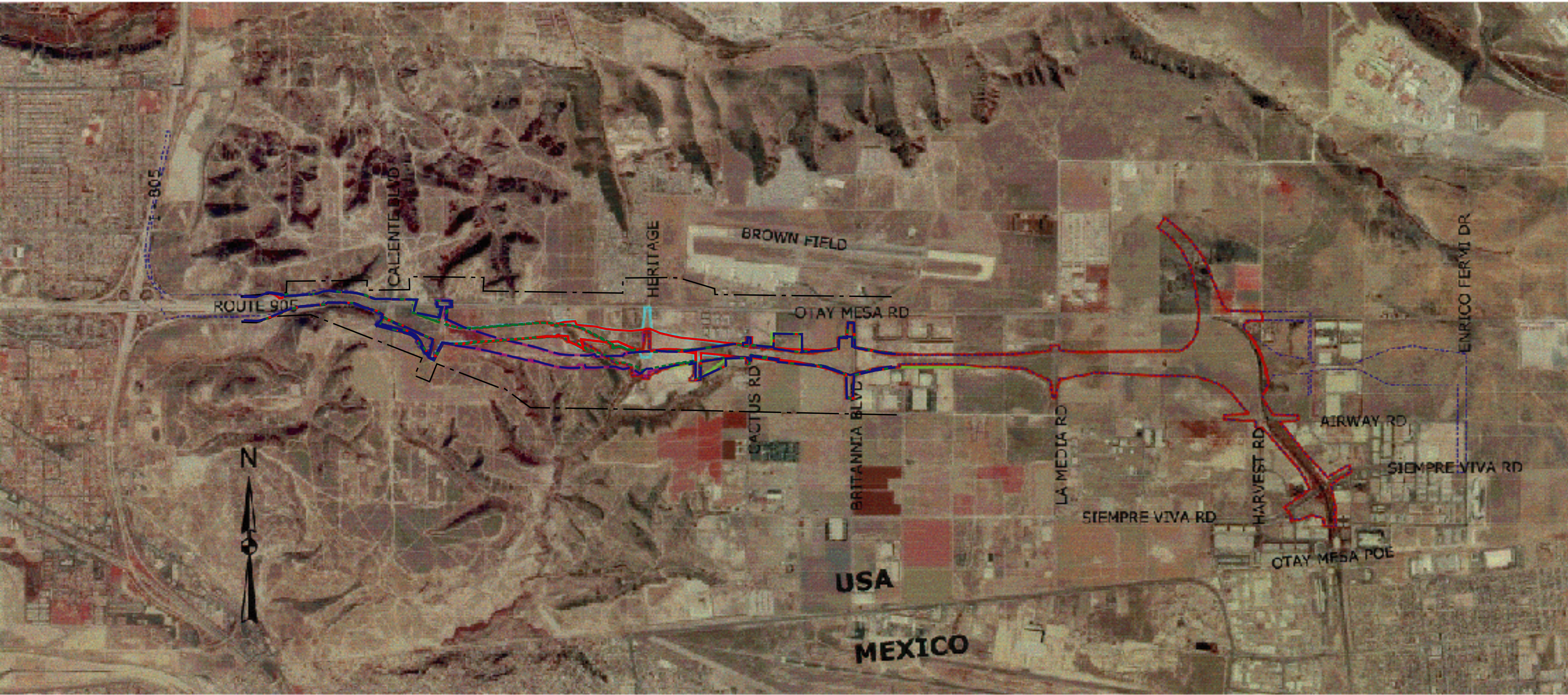
San Ysidro – San Diego Branch Library  
101 West San Ysidro Boulevard  
San Diego, CA 92173

South Chula Vista Library  
389 Orange Avenue  
Chula Vista, CA 91911

ENVIRONMENTAL ISSUES	Freeway Alignment Alternatives			Tollway Alignment Alternatives			No Project Alternative
	North Alignment	Central Alignment	South Alignment	North Alignment	Central Alignment	South Alignment	
<b>SOCIOECONOMICS</b>							
Homes Displaced	2	2	2	4	4	4	0
Business Displaced	2	2	2	2	2	2	0
Community Character/Cohesion	Minor Effect	Minor Effect	Minor Effect	Minor Effect	Minor Effect	Minor Effect	None
Consistency w/Local Land Use Plans	Yes	Yes	Yes	Yes	Yes	Yes	No
Support Planned Growth	Yes	Yes	Yes	Yes	Yes	Yes	No
<b>FARMLAND LOSSES</b> hectares (acres):							
Prime	10 (25)	10 (25)	10 (25)	10 (25)	10 (25)	10 (25)	0
Local/Statewide Importance	133 (329)	130 (322)	133 (329)	136 (336)	133 (328)	135 (335)	0
Agriculture - Active Use	66 (164)	66 (164)	66 (164)	68 (168)	67 (167)	68 (168)	0
<b>BIOLOGY</b> hectares (acres)							
MHPA (MSCP Lands)	6.7 (16.5)	8.7 (21.5)	13.9 (34.3)	6.9 (17.2)	9.1 (22.4)	14.2 (35.2)	No effect
Diegan Coastal Sage Scrub (undisturbed)	3.0 (7.4)	5.6 (13.8)	5.1 (12.6)	3.3 (8.1)	5.8 (14.5)	5.3 (13.2)	No effect
Diegan Coastal Sage Scrub (disturbed)	0.7 (1.8)	0.8 (1.9)	3.2 (8)	0.7 (1.8)	0.79 (1.9)	3.2 (8)	No Effect
Freshwater Marsh	0.31 (0.78)	0.274 (0.68)	0.3 (0.7)	0.31 (0.78)	0.27 (0.68)	0.27 (0.67)	No effect
Riparian Scrub	1.36 (3.36)	1.33 (3.27)	1.27 (3.13)	1.36 (3.36)	1.33 (3.27)	1.27 (3.13)	No effect
Eucalyptus Woodland	0.2 (0.4)	0.2 (0.4)	0.2 (0.4)	0.12 (0.3)	0.17 (0.4)	0.16 (0.4)	No effect
Annual Grassland (non-native)	32.4 (80)	32.4 (80)	32.4 (80)	33 (81)	33 (81)	33 (81)	No Effect
Wetlands (disturbed)	0.15 (0.36)	0.08 (0.19)	0.07 (0.17)	0.14 (0.35)	0.08 (0.19)	0.07 (0.17)	No Effect
Waters of the U.S.	0.33 (0.82)	0.1 (0.26)	0.05 (0.13)	0.31 (0.76)	0.11 (0.27)	0.05 (0.13)	No Effect
Vernal Pools	0.05 (0.13)	0.008 (0.02)	0.03 (0.08)	0.05 (0.13)	0.008 (0.02)	0.03 (0.08)	No Effect
Coastal Calif. Gnatcatcher Territory (# of pairs)	1	2	2	1	2	2	No Effect
San Diego Fairy Shrimp (# of pools found)	4	0	1	4	0	1	No Effect
<b>NOISE LEVELS</b> (sensitive receptors-dBA Leq)							
Residence w/Chapel (existing/predicted)	66/79	66/79	66/79	66/80	66/79	66/79	No Effect
South Side House	61/74	61/74	61/74	61/73	61/74	61/74	No Effect
Two-Story House	61/70	61/70	61/70	61/68	61/70	61/70	No Effect
<b>NOISE LEVELS</b> (with abatement - dBA Leq)							
Residence w/Chapel (4.3 m/ 14 ft barrier)	63	66	66	N/A	67	67	No Effect
South Side House (3.0 m/ 10 ft barrier)	66	67	67	N/A	64	64	No Effect
Two-Story House (2.4 m/ 8 ft barrier)	64	64	64	N/A	64	64	No Effect
<b>WATER QUALITY</b> (Relative General Impacts)	Minor/Mitigable	Minor/Mitigable	Minor/Mitigable	Minor/Mitigable	Minor/Mitigable	Minor/Mitigable	No Effect
<b>HAZARDOUS WASTE SITES</b> (Potential for Impact)	Yes	Yes	Yes	Yes	Yes	Yes	No Effect
<b>AIR QUALITY</b>	No Excedences	No Excedences	No Excedences	No Excedences	No Excedences	No Excedences	No Excedences
<b>CULTURAL RESOURCES</b>	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect	No Effect
<b>VISUAL IMPACTS</b> (after mitigation)	Low	Low	Low	Low	Low	Low	No Effect
Maximum Cut Slope (length/height in feet)	9,500/70	9,500/70	8,200/70	9,500/70	9,500/70	8,200/70	No Effect
Maximum Cut Slope (length/height in meters)	2,896/21	2,896/21	2,499/21	2,896/21	2,896/21	2,499/21	No Effect
Maximum Fill Slope (length/height in feet)	6,500/40	6,500/70	7,800/30	6,500/40	6,500/70	7,800/30	No Effect
Maximum Fill Slope (length/height in meters)	1,981/12	1,981/21	2,377/9	1,981/12	1,981/21	2,377/9	No Effect
<b>RIGHT-OF-WAY</b> hectares (acres)	124 (306)	127 (314)	125 (309)	131 (324)	134 (331)	132 (326)	0
<b>TOTAL COSTS IN MILLIONS</b> (estimate)	\$262	\$267	\$277	\$288	\$292	\$302	0

Table S-1

## SUMMARY OF ALTERNATIVE IMPACTS



- North Alignment

Central Alignment

South Alignment
- Freeway Alternative

Tollway Alternative (Additional footprint)

Expressway Alternative

Aerial Photograph of the Study Area

Figure  
S-1